

of meat-poultry-fish-eggs and of total food at home remained constant, the share in 1992 should have been about 92 percent of the 1980 level (1.423/1.548) or about 31.6 percent of the food budget. Because they accounted for only 26.4 percent, the quantities purchased of meat-poultry-fish-eggs declined relative to total food consumption, for a share index value of 0.83 (26.4/31.6).

Share Index Results

For most demographic groups, the share indexes for cereal and bakery products and for other food at home (includes frozen meals) indicate an increase in relative purchases of products between 1980 and 1992. More varieties of frozen meals were marketed as being gourmet-style foods or low in calories. Also, ownership of microwave ovens increased as did the number of dual-income families, making leisure time more valuable and prepared foods more affordable. For all other food items (meat-poultry-fish-eggs, dairy products, and fruits and vegetables), the indexes show a relative drop in purchases.

The share of the food budget allocated for eggs was reduced by almost half for most groups between 1980 and 1992. The share index for fish and seafood indicates a decrease in purchases between 1980 and 1992, likely because prices increased more (3.4 percent) per year than did those of beef (2.7 percent) or poultry (0.8 percent). The share index for fresh fruits and vegetables also declined, reflecting the fact that prices rose faster than prices of any other foods. Among families that reported purchases, real (inflation-adjusted) mean expenditures

Table 1. Changes in food purchases, all consumer units, 1980 and 1992

Item	1980	1992	Percent change in CPI, 1980-92	Share index
<i>Percent</i>				
Share of food at home				
Food at home	100.0	100.0	54.8	-
Cereal and bakery products	12.9	15.8 ¹	80.6	1.05
Cereal and cereal products	4.2	5.4 ¹	82.1	1.09
Bakery products	8.7	10.4 ¹	79.5	1.03
Meat, poultry, fish, and eggs	34.4	26.4 ¹	42.3	.83
Beef	13.2	8.1 ¹	34.5	.71
Pork	7.3	6.0 ¹	56.0	.82
Other meats	4.6	3.6 ¹	41.3	.86
Poultry	4.5	4.7	40.2	1.15
Fish and seafood	2.8	2.9	73.4	.92
Eggs	1.9	1.1 ¹	22.2	.73
Dairy products	13.5	11.6 ¹	41.4	.94
Fresh milk and cream	7.1	5.1 ¹	36.4	.82
Other dairy products	6.4	6.5	48.3	1.06
Fruits and vegetables	14.8	16.5	89.3	.91
Fresh fruits	4.3	4.9 ¹	117.2	.81
Fresh vegetables	4.2	4.9 ¹	99.9	.90
Processed fruits	3.5	3.9 ¹	67.7	1.03
Processed vegetables	2.8	2.9	55.0	1.03
Other food at home	24.4	29.7 ¹	43.9	1.31
Sugar and other sweets	3.6	3.9 ¹	47.1	1.14
Fats and oils	2.9	2.8	45.4	1.03
Miscellaneous foods	8.8	14.8 ¹	67.6	1.55
Nonalcoholic beverages	9.2	8.2 ¹	25.1	1.10

¹ Change in share is statistically significant at the 95-percent confidence level.

Table 2. Food purchases, 1980 and 1992

Item	Share index		
	Low income	Middle income	High income
<i>Percent</i>			
Share of food at home			
Food at home	-	-	-
Cereal and bakery products	.99	1.04	1.10
Cereal and cereal products	.97	1.04	1.22
Bakery products	.99	1.04	1.06
Meat, poultry, fish, and eggs	.94	.82	.76
Beef	.93	.69	.59
Pork	.94	.84	.67
Other meats	.85	.90	.85
Poultry	1.06	1.10	1.27
Fish and seafood	.89	.77	.98
Eggs	.72	.73	.67
Dairy products	.96	.98	.92
Fresh milk and cream	.86	.86	.78
Other dairy products	1.08	1.11	1.03
Fruits and vegetables	.90	.92	.95
Fresh fruits	.76	.88	.85
Fresh vegetables	.86	.83	.99
Processed fruits	1.02	1.10	1.00
Processed vegetables	1.07	1.00	1.04
Other food at home	1.18	1.30	1.38
Sugar and other sweets	1.08	1.14	1.23
Fats and oils	.90	1.06	1.03
Miscellaneous foods	1.43	1.55	1.61
Nonalcoholic beverages	1.04	1.11	1.15

for fresh fruits declined from \$3.35 to \$2.29 and for fresh vegetables, from \$3.28 to \$2.52. However, the percentage of all families reporting expenditures for fruits and vegetables increased from 75 percent in 1980 to 78 percent in 1992.

Age

Older people have different health concerns than younger people and so may be more inclined to eat carefully; life-long eating habits may be difficult to change, however. When share indexes were examined by age, few differences

in the direction of change were found. The exception was for fats and oils: the share index for the youngest group indicated a 9-percent decrease, compared with a 6-percent increase for the oldest group.

Income

Families with lower incomes have less flexibility than higher income families to adjust their food expenditure patterns should prices of foods change. Also, reference persons and main-meal planners in families with lower incomes have lower levels of education, so they may not be as informed about health issues.

The share indexes of those in the highest income group were most likely to indicate a change in a more healthful direction. For example, the share indexes for cereal and bakery products and fresh vegetables were higher in the highest income group than in other income groups (table 2). In contrast, share indexes for meat-poultry-fish-eggs and dairy products were lower in the highest income group, compared with other income groups. Share indexes for other food at home were also highest for the highest income group. Among specific foods, consumption of beef and pork declined least in the lowest income group, and poultry consumption increased most in the highest income group. Expenditures for eggs decreased most for the highest income group.

Gender

Only families consisting of a single person where the person making purchasing decisions and the reference person must be one and the same were examined to determine whether gender of the reference person influenced purchasing decisions. Analysis showed that there were few differences in expenditure shares by gender in 1980 and none in 1992. Share indexes for meat-poultry-

fish-eggs, however, declined more for women than for men. The indexes for fruits and vegetables were the same for both men and women and indicated a decrease in purchases. Whereas men cut back more on fresh vegetables and less on fresh fruits, women cut back more on fresh fruits and less on fresh vegetables. Women increased their purchases of sugar and sweets but not those of fats and oils; men decreased their purchases of sugar and sweets and increased those of fats and oils.

Race

Blacks spent larger shares than did Whites and others on pork, poultry, fish and seafood, and eggs in both 1980 and 1992. Blacks increased their consumption of fish and seafood between 1980 and 1992, whereas Whites and others increased their consumption of poultry.

Logit Regression Results

Logit analysis was used to estimate the probability that a particular family would purchase a certain type of food, given the family's characteristics. An increase in the probability of purchasing suggests that more families are reporting purchases of the food rather than an increase in the number of purchases by families that already consume the food regularly. Various demographic characteristics were held constant, and predictions were made for specific groups of families. For example, if the effect of age on the probability of purchasing was the characteristic to be isolated, the "control" family was compared with another family with identical characteristics except for age. Families that did not report purchases of groceries (about 11 percent) were eliminated from the sample because the probability that the family buys any specific food is zero.

The control family was defined as a family consisting of a husband, wife, and one child; in the middle-income group; living in an urban area; not participating in the Food Stamp Program; participating in the Diary survey in the spring (April, May, or June); and whose reference person is 35 to 64 years old, not Black, and never attended college. The control group exhibited statistically significant decreases in the probability of purchasing items from four food groups: Meat (5 percent), fish and seafood (6 percent), eggs (14 percent), and dairy products (4 percent). These food groups contain foods that are high in saturated fat (dairy products), cholesterol (seafood), or both (eggs and meat). Changes in probability are not statistically significant for any other food groups.

Age and Income

Families whose reference person was age 65 and over were more likely to purchase meat, poultry, eggs, dairy products, and fats and oils than were younger families in both 1980 and 1992. Older consumers had a higher probability of purchasing fruits and vegetables than did younger consumers.

Low-income families had a significantly lower probability of purchasing meat than the control group had in both 1980 and 1992. Middle- and high-income families appeared to have similar probabilities in both years for purchasing every food group.

Gender

Single men showed a statistically significant increase in the probability of purchasing meats: from 67 percent in 1980 to 70 percent in 1992; single women, a decrease: from 68 to 65 percent. Single women were more likely than single men to purchase fats and oils in 1980.

Compared with men, women had a higher probability of purchasing dairy products in 1980; both men and women had lower probabilities of purchasing dairy products in 1992 than in 1980. Single men had a lower probability of purchasing fruits and vegetables (72 percent) than did single women (81 percent) in 1980. The probabilities increased in 1992 for both genders.

Race

Except for poultry, Black families' probabilities of purchasing food in 1992 were not statistically distinguishable from those of White and other families. In 1980, however, Black families were more likely to purchase fish and seafood and less likely to purchase dairy products, fruits and vegetables, fats and oils, and other foods than White and other families.

Education

The probability of purchasing meats decreased substantially (about 10 percentage points) between 1980 and 1992 for college graduates. Families with a reference person who was a college graduate also showed declines in the probability of purchasing eggs and fats and oils.

Income Elasticities

Income elasticity is used in this article to show by what percentage expenditures for a selected food group are expected to increase given a 1-percent increase in income. An increase in income elasticity over time indicates that it takes less of an increase in income to induce a purchase of a particular item than it did before. Real expenditures and real incomes were averaged for each group across time to be certain that differences in observed elasticities were due to changes in tastes and other factors influencing expenditures and not just differences

in incomes. Price elasticities were not estimated because the CE lacks data on prices, but the analysis presented here does control for price changes over time.

As expected, the individual food categories were income inelastic in each year; that is, a 1-percent increase in income meant an increase of less than 1 percent in expenditures for each individual food category. There are, however, three distinct groups into which the food categories fall: those for which elasticities increased over time for most population groups (cereal and bakery products, fish and seafood, and other food at home); those for which elasticities were positive in 1980 for most groups and did not change over time (beef, pork, and other meats, dairy products, and fruits and vegetables); and those for which elasticities were statistically indistinguishable from zero in both years (poultry, eggs, and fats and oils).

Expenditures in the last group are called “perfectly inelastic,” indicating that quantities purchased do not change with income. Expenditures in the other groups are called “necessities” because their elasticities are greater than zero but less than unity (one). No “luxury” foods (those with elasticities greater than unity) were found. “Other food at home,” which includes a substantial amount of convenience foods, showed increasing elasticities for almost every demographic group. More and more frozen meals have become popular each year as microwave ownership has increased.

Age

Elasticity varied little with the reference person’s age. However, the elasticities for meat were larger for families 65 and older than they were for younger families. Elasticities for fish and seafood also

appeared to differ by the reference person’s age: significant for families headed by a reference person over 35 years old but not so for families headed by younger reference persons.

Gender

Single men and women had very similar elasticities for cereal and bakery products, poultry, and other food at home in both 1980 and 1992. Single men had a higher elasticity for fruits and vegetables than did single women in both years and for fish and seafood in 1992.

Race

Black families had an income elasticity that was both positive and significantly different from zero for fish and seafood in 1992 and fruits and vegetables in 1980. White and other families had increasing elasticities for cereal and bakery products, fish and seafood, and other food at home. Elasticities were significantly different from zero for White and other families for meat (1980), poultry (1992), dairy products (1980 and 1992), fruits and vegetables (1980 and 1992), and fats and oils (1992).

Conclusion

In general, findings indicate that consumers were reacting to the ever-changing news about relationships of food to health, but some demographic groups responded differently than others. It appears that consumers were substituting poultry for meats with a higher fat content and were reducing their consumption of eggs. However, the consumption of fruits and vegetables has declined, although most demographic groups were purchasing them more frequently. Both consumption and frequency of purchasing fish and seafood declined for most demographic groups. Income elasticities for fish and seafood have

increased substantially, indicating expenditures increased more rapidly with income in 1992 than in 1980.

Further work analyzing trends by demographic groups should provide further insight into changing food expenditure patterns, especially as more data on nutritional attitudes and awareness become available.

Source: Paulin, G.D., 1998, The changing food-at-home budget: 1980 and 1992 compared, *Monthly Labor Review* 121(12): 3-32.